OPEN SPACE/CONSERVATION ELEMENT

City of Manteca

May 1973

INTRODUCTION

CAPSULE OVERVIEW

The purpose of this document is to provide the City of Manteca with goals and objectives which will be reflected by policy statements and implementive programs to enhance the environmental conditions of the community. There has been much popular concern for the environment and ecology. But this is simply the particular form that a general concern for the quality of human life has taken in the context of a realization of the importance of physical surroundings. These physical surroundings consist of two basic components, i.e., the man made and the natural elements. The interaction of these two basic physical surrounding components constitutes the environment and the one way in which they interact out of many possibilities determines the quality of life. Hence the Conservation and Open Space Element of the General Plan focuses generally on the interaction of the man made and the natural elements, and as the other elements of the plan deal with specific man made factors, this element will deal specifically with the natural factors.

This element must first state basic assumptions for the City of Manteca surrounding its environment and the quality of life the community desires. From this, then, can be derived general goals. These will be more specifically stated in the form of objectives relating to particular sections of this document. Each section deals with a particular aspect of open space and conservation. After objectives and conditions have been discussed, policies will be summarized at the end of each section.

LEGISLATION

The California Government Code was amended by the State Legislature in 1971 by adding several required elements to the General Plans of cities and counties. This legislation was primarily intended to respond to a growing concern for environmental problems. This concern was further underscored by the Legislature in 1972 by adding that Conservation and Open Space Elements would be adopted by June 30, 1973. But the Open Space Element really overlaps with this Conservation Element, hence most cities and counties combine these into one document. This is indeed the case in the City of Manteca.

An open space element defines types of open spaces and inventories existing stock in the plan area. It further delineates goals and objectives relative to these types of open space for preservation and expansion within the plan area. It is often a somewhat broad document in its scope whereas the conservation element is specific. The conservation element must identify the natural and man made resources of the general plan area and outline policies for their preservation.

RELATIONSHIP TO OTHER ELEMENTS AND REPORTS

The Open Space/Conservation Element takes into account those policies and objectives adopted by the San Joaquin County Council of Governments and San Joaquin County in their similar plan elements. More specifically, this document concurs with their findings and statements. The City of Manteca recognizes that regions and spheres of influence overlap, particularly in

the natural environment, and therefore that cooperation between overlapping jurisdiction is essential. The City's own Recreation Element has of course been relied upon heavily in the open space portion of this document. The recreation element identifies the majority of the City's existing and planned future open space. It is also, therefore, a primary vehicle for implementation of the open space portion of this element.

Finally, this element's statement of objectives, findings, and policies will also help to achieve the following:

1. Assist in the preparation and review of Environmental Impact Reports.

2. Provide information necessary to establish open space zoning.

3. Aid in the development of future studies, including update of the General Plan.

ASSUMPTIONS

1. The City of Manteca will continue to receive considerable pressure for growth and development as a result of continued economic expansion nationally, regionally, and locally.

2. Future population growth will create increasing pressure for utilization of natural resources and agricultural and open land.

3. There is a demand and need for open space.

4. Increases in leisure time and real disposable income will produce increasing demand for new and expanded educational, recreational, and cultural facilities.

5. Agriculture and agriculturally dependent industries will continue to play a major role in the economy of San Joaquin County and the Manteca area.

6. Community awareness of environmental values increase and result in increasing pressure for government to respond.

7. These will be increased application of federal, state, and regional programs to deal with natural resources and the pollution problems of air, water, solid waste, land use, and population growth.

GOALS

1. Provide an open space program which meets the open space needs of present and future generations of Manteca residents.

2. Establish prinicples of sound resource management for the use, reuse, and conservation of Manteca's natural resources.

OPEN SPACE FOR MANAGED RESOURCE PRODUCTION

OBJECTIVES

1. Encourage the continued use of existing productive agricultural land within and around Manteca's General Plan boundaries.

2. Discourage fragmentation of land into small parcels within Manteca's sphere of influence and outside the General Plan boundaries.

3. Maintain the capability of aquifer recharge areas to produce quality water for urban and rural uses.

FINDINGS

WATER RESOURCES

Manteca's domestic water supply comes entirely from ground water sources. Agricultural irrigation utilizes both ground water and imported surface water. There are no lakes, rivers, streams or reservoirs within the Manteca General Plan area. However, there is considerable water available in the region for importation for agricultural purposes. Although the numerous rivers and streams in the area are dry in the summer and early

fall, considerable water storage projects were initiated to retain supply from the run-off reason. Since agricultural production is relatively limited in the Manteca General Plan area, concern must be focused upon the ground water source system.

Geologically, Manteca is located in a basin of recent alluvium deposits that consist of silt, sand, gravel, and clay of moderate permeability. Ground water enters the basin by percolation from surface streams, by rainfall infiltration, and by percolation from unconsumed water in irrigated land.[1.,2.] This water is retained by a depositional contact zone between the coarser sediments in the Manteca area and the finer Delta sediments to the west. This zone also appears to impede eastern movement of poor quality sodium chloride water into the ground water underlying the Manteca area.[3.]

The water-bearing formations are not always continuous, but may have vertical displacements of silt and clay. These displacements can impede horizontal movement of ground water from zone to zone. Silt and clay lenses between the water bearing formations also impede the vertical movement of ground water. For example, there is an area approximately seven miles northeast of the city where ground water has been lowered 50 feet over the 10 year period from 1953 to 1963.[4] This lowering is a result of pumping water for irrigation that exceeds the recharge rate. However, the State Department of Water Resources determined in a study

that the overall water table in the Manteca area was not lowered significantly between 1950 and 1964.[5] This study also indicated that Manteca is so located that ground water recharge from the east will continue to maintain an adequate ground water level.

Aquifer recharge areas are those surface areas that have been identified as possessing the particular soils and subsurface materials with the characteristics that allow the passage of water into the water-bearing strata. According to the California Department of Water Resources, Manteca is in an area of slight to moderate recharge.(Figure 1) As pointed out in the discussion above, much of Manteca's aquifer recharge results from horizontal movement within the subsurface strata from the east. It is also replenished by vertical movement from the various surface waters. Hence, as development alters the characteristics of the surface, the ability to recharge from surface sources will vary. Of specific concern here is the fact that urban development increases the area of impermeable paved surfaces, such as pavement, roofs, etc., and hence reduces the amount of recharge from surface water. (Figure 2) Care should be taken to see that future urban development in the Manteca General Plan area does not disrupt the capability of aquifer recharge of ground water sources. Further, the total capability of these systems must be accurately assessed so that overdraft does not occur.

AGRICULTURAL RESOURCES

The Great Central Valley of California is one of the largest producers of food in the world. San Joaquin County, in which Manteca is located, is

FIGURE 1

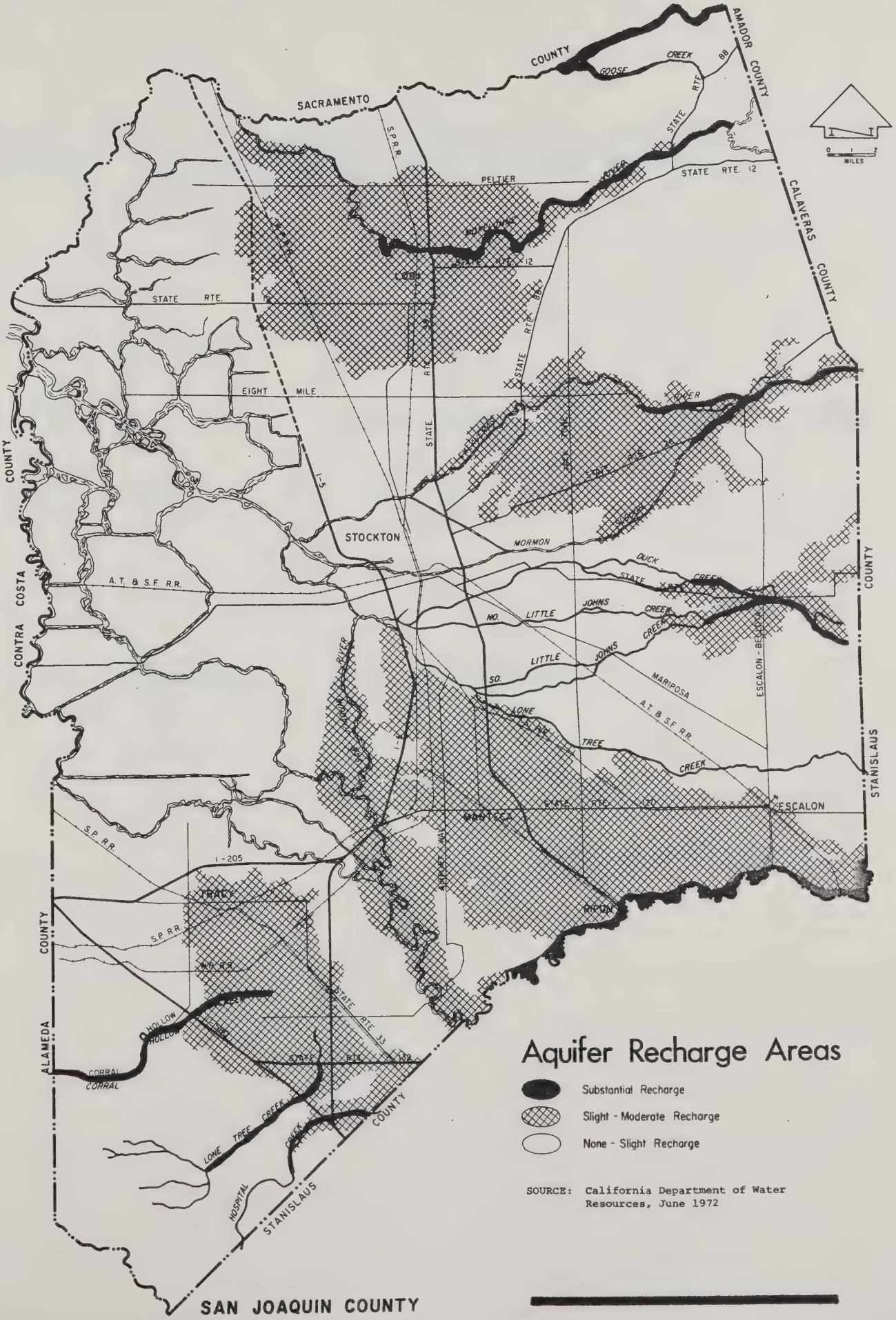
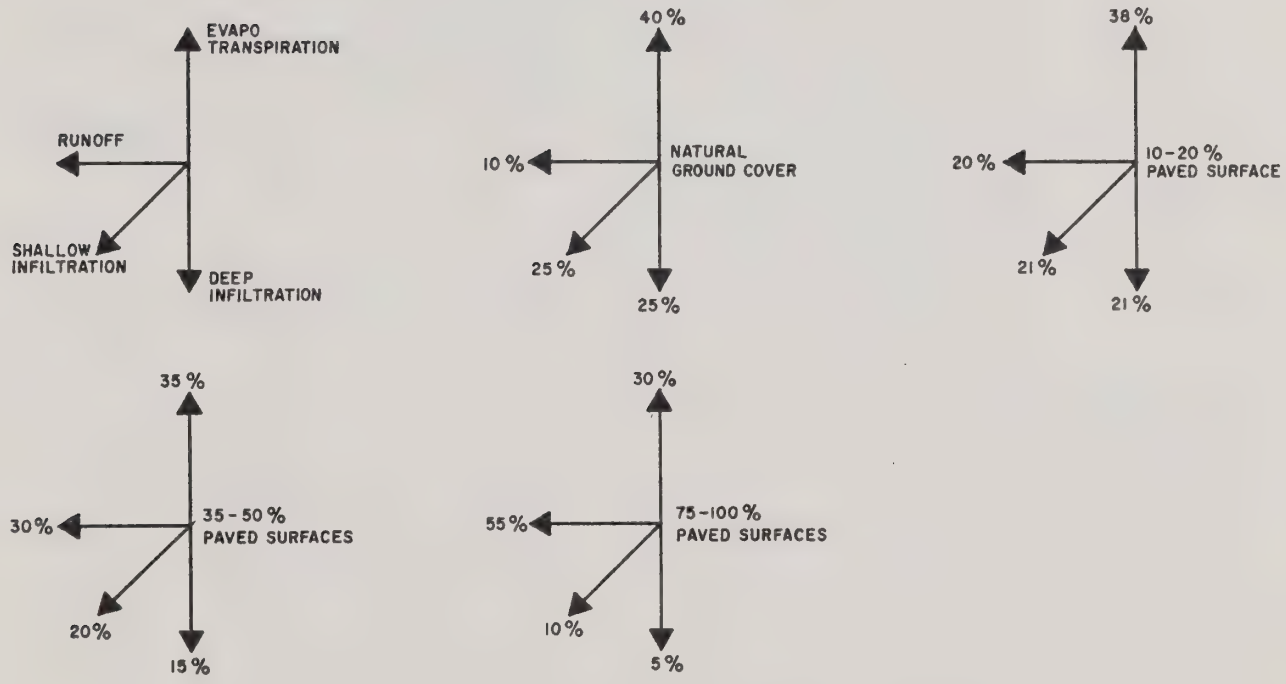

SACRAMENTO COUNTY
AMADOR COUNTY
CALAVERAS COUNTY
STANISLAUS COUNTY
CONTRA COSTA COUNTY
ALAMEDA COUNTY
SAN JOAQUIN COUNTY
STOCKTON
TRACY
RIPON
ESCALON
MANTECA
PELTIER
EIGHT MILE
GOOSE CREEK
STATE RTE. 88
STATE RTE. 12
STATE RTE. 120
STATE RTE. 33
STATE RTE. 132
I-5
I-205
S.P.R.R.
A.T. & S.F. R.R.
MORMON CHANNEL
DUCK CREEK
NO. LITTLE JOHNS CREEK
SO. LITTLE JOHNS CREEK
MARIPOSA
TREE CREEK
HOLLOW CREEK
CORRAL CREEK
LONE TREE CREEK
HOSPITAL CREEK
ESCALON-BELLOTA
MILES
Aquifer Recharge Areas
Substantial Recharge
Slight - Moderate Recharge
None - Slight Recharge
SOURCE: California Department of Water Resources, June 1972

Figure 2 ▪ TYPICAL HYDROGRAPH CHANGES DUE TO INCREASING AREA OF IMPERMEABLE PAVED SURFACES - ROOFS, ETC. IN A DEVELOPING AREA



SOURCE: ENVIRONMENTAL PROTECTION IN URBAN GROWTH AREAS BY JOACHIM TOUBIER URBAN LAND SEPT. 1972

iculturally productive of the Counties in the Central
n County has consistently ranked among the top five
ted States in terms of gross value of agricultural
an annual gross value of agricultural production of
llars in 1972, it is obvious that agriculture is a
e County's and the City of Manteca's economy. This
resource is an important factor to be considered,
element.

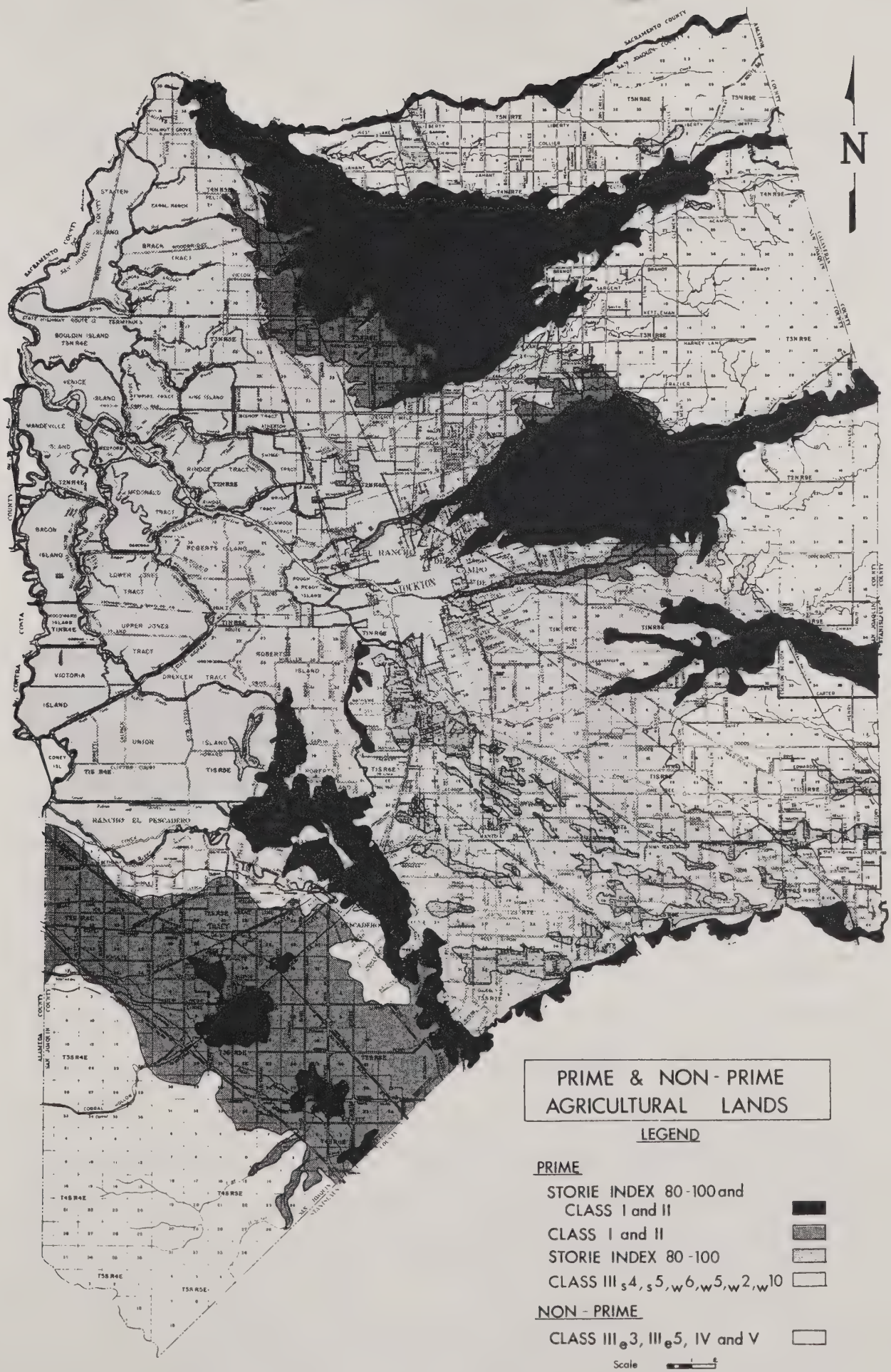
al area is dependent upon adequate soils. The region
eca area is a part is blessed with an abundance of agri-
tive soil types. According to a San Joaquin County
over 80 percent of the land in the County can be
ime agricultural land, as defined by the following
3):

nd rated 80-100 in the Storie Index Rating System.

nd rated as Class I and Class II in the Soil
vation Service Land Use Capability Classification.

and rated as Class III with the capability units of
$_5$, W_2, W_5, W_6, and W_{10} in the U.S. Soil Conservation
ce Land Use Capability Classification.[6]

FIGURE 3



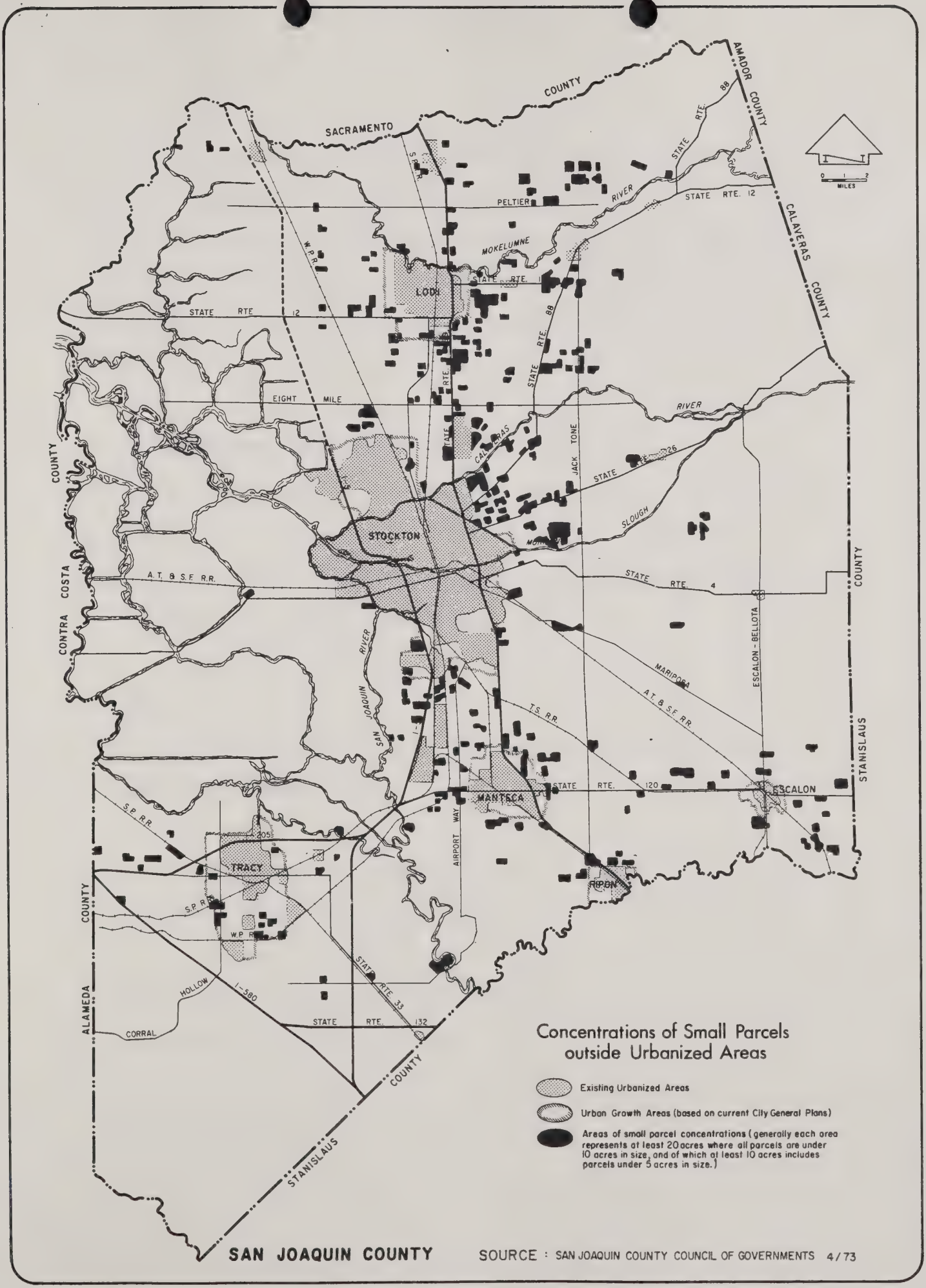
SOURCE : SAN JOAQUIN COUNTY COUNCIL OF GOVERNMENTS 4/73

Included in this definition are most of the irrigable lands in the County.

In the Manteca area, much of this prime agricultural land is also prime land for development. The combination of flat land of fairly sandy soils allows construction of residential and commercial development with very little grading and minimum site preparation. As the City has developed more and more land has been taken from agricultural use for residential development. This can be expected in the normal growth process of a city. However, development of a more limited nature at the fringe of the city constitutes a different threat to agricultural land. Land at the fringe of the County's cities, which is suited for agriculture, has been divided into numerous small parcels for "estate" or "rural" residential development. In many cases, this uncontrolled parcelling of land has made continued agricultural use more difficult because of fewer economically feasible large parcels of available land. This disruption of the agricultural hinterland is one of the causes of the early demise of agricultural production in the Santa Clara Valley. As figure 4 shows, this has indeed been the pattern throughout San Joaquin County, including Manteca. A corallary problem has been the leapfroging of city growth rather than logical contiguous development. This results in premature and unnecessary conversion of agricultural land to urban development.

Another observation can be made regarding Manteca's development and agricultural resources. That is, the City has made no provision to preserve agricultural land or open space under the California Land Conservation Act

FIGURE 4



SAN JOAQUIN COUNTY

SOURCE : SAN JOAQUIN COUNTY COUNCIL OF GOVERNMENTS 4/73

(Williamson Act) of 1965. This has been logical in that in the past, the City was very small areally and its growth has also been in small increments. However, the City must look toward its future expansion to the General Plan area which encompasses some 16 square miles. Within this area, provision should be made for some agricultural and open space preserves.

FISHERIES AND EXTRACTIVE RESOURCES

Within the Manteca General Plan area, there are no lakes, rivers or streams, nor are there any known mineral deposits. Therefore this portion of the required contents of Open Space/Conservation element by State legislation cannot be discussed.

POLICIES

1. A coordinated approach will be taken towards solving all water supply and demand problems.

2. Developmental impact on recharge capability will be determined and considered in all future developments.

3. Growth inducing potentials will be considered in all future water supply and treatment facilities.

4. The City will oppose all non-contiguous development which prematurely causes the removal of land from agricultural activity.

5. The City will oppose the fragmentation of land parcels in its fringe into smaller residential parcels.

6. The City will begin to implement land conservation programs for agriculture and open space preserves in accordance with provisions of the Land Conservation Act of 1965.

OPEN SPACE FOR PRESERVATION OF NATURAL AND HUMAN RESOURCES

According to State Legislation, cities and counties shall, among other items discussed herein, consider the following in their Open Space/ Conservation elements:

a. Ecological and wildlife study.
b. Preservation of fish and wildlife and their habitats.
c. Mineral deposits.
d. Fisheries.
e. Scenic, historic, and cultural preservation.
f. Waterways and lakes.

The City of Manteca's particular situation renders the above considerations not germane. This can be verified by studies prepared by the San Joaquin County and San Joaquin County Council of Governments planning staff in conjunction with development of their respective open space/conservation elements.

OPEN SPACE FOR HEALTH, WELFARE, AND WELL-BEING

OBJECTIVES

1. Provide open space for passive use as well as active multiple usage.

2. Provide open space to meet the recreation needs of present and future Manteca residents.

3. Encourage multiple use of open space where uses are clearly not incompatible.

4. Recognize the need for clear open space in areas of potential public hazard.

FINDINGS

OPEN SPACE FUNCTIONS

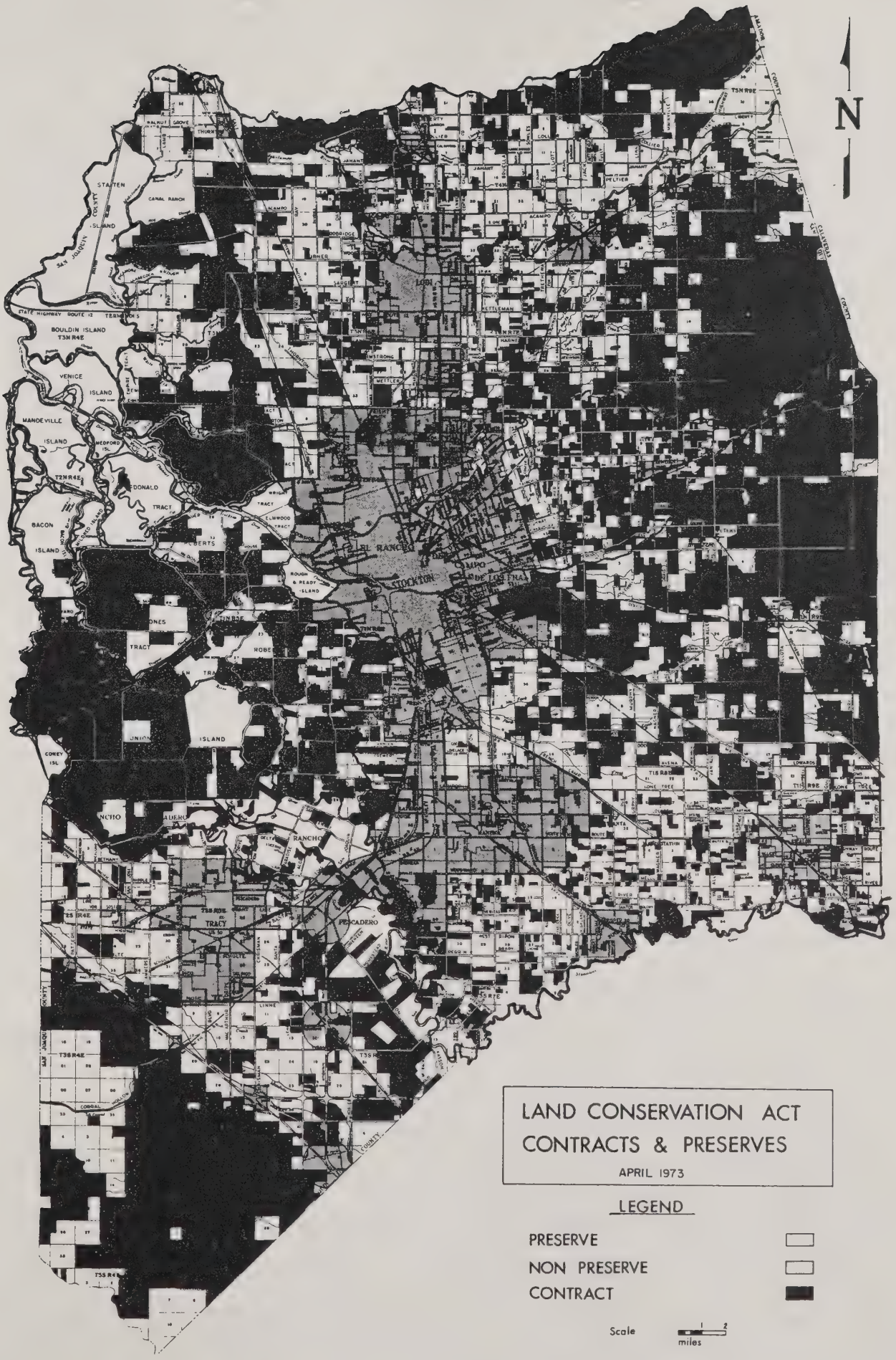
Some of the functions of open space have already been discussed, i.e., for agricultural and other natural resource preservation. Of course, there are

many other open space functions that came under the broad heading of health, welfare and well-being. The most obvious of these are outdoor recreational open space. This is open space generally in the form of parks of a generalized or multiple use concept, or special playfields and areas such as golf courses. The other types of open space in this broad category is that used for disposal sites, visual amenity and areas to guide development. Finally, in the Manteca situation, open space for public safety could be considered in the same broad context. These are open space to protect people from potential hazards, i.e., airport flight paths, flood prone areas, areas of unstable soils or seismic activity, and public utility corridors. Each of these will be discussed in turn.

OPEN SPACE FOR OUTDOOR RECREATION

The City has an adopted (1971) recreation element of the General Plan.[7] This document has a careful study of the outdoor recreation needs of the City for the next twenty years, based upon the findings of the General Plan. One of the conclusions and recommendations of the Recreation Element is that a standard of 2.5 acres of neighborhood park and 2.5 acres of general community wide parks and open space for each 2,000 persons be adopted. This recommendation has been followed as closely as fiscally possible, and the City has enacted a Park Acquisition and Improvement Fee Ordinance to implement these recommendations. This ordinance is presently being revised to insure that these standards are maintained. The existing and future parks and open spaces recommended in the plan are shown in figures 6 and 7.

FIGURE 5



SOURCE : SAN JOAQUIN COUNTY COUNCIL OF GOVERNMENTS 4/73

Another aspect of outdoor recreation, but somewhat apart from parks are areas for recreation travel. The City's scale is such that there are no scenic highways or drives, parkways or trails. There are no waterways within or immediately adjacent to the City. However, the City has considered a system of bicycle routes and a report was submitted to City Council. This report is still being considered, and an experimental adoption of routes is very possible.

OPEN SPACE FOR OTHER HEALTH, WELFARE, AND SAFETY PURPOSES

Manteca has relied on coordination with regional systems for disposal of wastes and air quality considerations, as these are truly regional problems. The City's disposal site is located in the unurbanized portion of the County. The San Joaquin County Council of Governments has been conducting a study of solid waste disposal for the region and the City has actively participated. The City will utilize the regional system in the future.

The public safety aspects of open space are of somewhat limited consideration in Manteca's case. The City is not in an area of potential flooding and there are no unstable soils or extreme topography in the area. Seismic activity has been unknown, but geologists are discovering faults in the valley area. A future study of possible seismic hazards would be advisable. Although the City is not adjacent to an airport, the commercial aviation facility south of Stockton does have a minor impact in that low flying jet aircraft create a noise problem. This is more properly treated in future plan studies regarding noise per se.

The City does have a considerable amount of land in open space for utility transmission easements. These are not meant to be normal P.U.E.'s for home service, but rather such significant easements as PG&E's large transmission lines and the SSJID's irrigation ditches. In the case of the PG&E easement, a 100 foot swath of power lines and open space bisects the City diagonally from the southwest to the northeast. In the development of the City, this type of open space was not really planned for. But, its existence must be taken into account in the future development of the City. The present situation, namely the incorporation of such easements into residential lots, renders multiple use of them virtually impossible. This is another consideration which should be made in the General Plan update. The existing significant P.U.E.'s are shown in figure 8.

Finally, areas of open space to shape urban expansion should be considered. The use of the various types of open space to mold the city to a desired pattern of development has been utilized with increasing regularity in recent general plans. At the time of this writing, the Manteca General Plan will be updated within the next year. At that time, this issue will be dealt with in greater detail. Furthermore, this element will be reviewed, revised, and updated as necessary.

POLICIES

1. Continue to implement the Recreation Element of the Manteca General Plan.

2. The City will continue its policy of requiring parks and open space

dedication in major new subdivisions.

3. The multiple use of open space will be encouraged and supported whenever possible.

4. Projects which are detrimental to air quality will not be permitted.

5. Open space as a control of patterns of future urban development shall be considered in the General Plan update.

6. The use of significant P.U.E.'s will not be encouraged so that multiple use of the easements for bicycle paths and urban trails may be possible.

FOOTNOTES

1. State of California, The Resources Agency, Department of Water Resources, Bulletin #74-5 - Water Well Standards: San Joaquin County, Preliminary Edition, March 1965.

2. State of California, The Resources Agency, Department of Water Resources, Bulletin #146 San Joaquin County Ground Water Investigation, July 1967.

3. Ibid.

4. State of California, The Resources Agency, Department of Water Resources, Bulletin #74-5, Op. Cit.

5. State of California, The Resources Agency, Department of Water Resources, Bulletin #146, Op. Cit.

6. San Joaquin County Planning Department, Open Space/Conservation Element, Hearing Draft, June 1973, p. 4.

7. City of Manteca, A Recreation Element of the General Plan, Daniel, Mann, Johnson, Mendenhall, Consultants, August 1971.

SUBJECT CITY MAPS FILE NO. D - 27

LOCATION MANTECA

TITLE RECREATION ELEMENT PROPOSED PARK DEVELOPMENT

DATE 5 / ___ / '73 SCALE 1" = 1800'

SHEET SIZE 12" x 12" NO. OF SHEETS 1

DESIGNED BY B.C.

MEDIUM: TRACING ☐, BLUELINE ☐, SEPIA ☐, CLOTH ☐, MYLAR ☑

GENERAL DESCRIPTION FIGURE 7 FOR CONSERVATION ELEMENT.

MAP FILE CARD INDEX

SUBJECT CITY MAPS FILE NO. D - 28

LOCATION MANTECA

TITLE MAJOR PUBLIC UTILITY EASEMENTS

DATE 5 / ___ / '73 SCALE 1" = 1800'

SHEET SIZE 12" x 12" NO. OF SHEETS 1

DESIGNED BY B.C.

MEDIUM: TRACING ☐, BLUELINE ☐, SEPIA ☐, CLOTH ☐, MYLAR ☑

GENERAL DESCRIPTION FIGURE 8 FOR CONSERVATION ELEMENT.

MAP FILE CARD INDEX